

Sture PETERSSON et al.

R E M A R K S

The above change in the claim merely place this national phase application in the same condition as it was during the international phase, with the multiple dependencies being removed.

Attached hereto is a marked-up version of the changes made to the claim by the current amendment. The attached page is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE".

Respectfully submitted,

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By



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

The claim has been amended as follows:

4. (Amended) The method according to ~~any of the~~
~~preceding claims~~ 1, characterized by the further step of
producing a pore spacing being less than the image detector
pixel size (2) to provide a structure without the need for
alignment to the image detector chip (1).

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ABSTRACT OF THE DISCLOSURE

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A method and device for producing an X-ray pixel detector, for X-ray photons, the detector presenting high efficiency combined with high resolution for obtaining a high image quality detector while at the same time minimizing the X-ray dose used. The application is particularly important whenever the X-ray photon absorption distance is much longer than the required pixel size. The arrangement presents a structure based on light-guiding of secondarily produced photons within a scintillating pixel detector in conjunction with, a CCD or a CMOS pixel detector. The structure presents a matrix (8) having deep pores (10) fabricated by high-aspect ratio silicon etching techniques producing very thin walls and with a pore spacing less or equal to the size of a pixel (2) of the image detector used. The pore matrix is subsequently filled by melting a scintillating material into the pores such that, in each pore, a single scintillating block is formed. The silicon matrix (8) may further utilize a reflective layer to increase light guiding down to the image detector chip.